

very small insects, the immatures or matures of the other species were much larger and ate much larger insects.

The observed contacts occurred when *P. audax* was nesting and *P. rimator* was mating. There was some overlap in the use of nesting and mating sites at that time. However, no competition was observed. Five cases were observed where a female *P. audax* and a pair of *P. rimator* lived within 1 to 3 feet of each other on the same fence post. The individuals often passed within 3 to 4 inches of each other without fighting; at most they made only slight threat displays and usually took no notice of one another. In each of these cases the broods and the matings appeared to be successful.

In some laboratory observations on captive adults there were many fatal fights between the two species and often fatal flights between males and females of the same species. If the female spiders were put into a container first and allowed to build chambers, there was less fighting. The safety of these chambers and a lack of confinement probably accounted for the want of observed fighting between *P. audax* and *P. rimator* when mating and nesting in close proximity under natural conditions.

Undescribed Species of Crane-flies from the Western United States and Canada (Dipt.: Tipulidae) Part XIV

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The preceding article under this general title was published in ENTOMOLOGICAL NEWS 63: 233-237, 267-271, 1952. The novelties considered herewith result chiefly from collections made by the author and his friends, Kenneth M. Fender and James Baker, in the Northwestern United States in 1953. The types of the new forms are preserved in my extensive collection of crane-flies.

Tipula (Oreomyza) idahoensis new species

General coloration of mesonotum brownish gray, the praescutum with a conspicuous central stripe, the posterior sclerites, with the pleura, clearer gray; wings tinged with brown, the obliterative area at cord conspicuous; R_{1+2} entire; abdomen obscure yellow, the tergites with three nearly continuous brown stripes; male hypopygium with the tergite entirely divided medially by pale membrane; phallosome conspicuous, the apophyses long and slender; ovipositor with the valves, especially the cerci, short and obtuse.

♂. Length about 14 mm.; wing 15 mm.; antenna about 4.6 mm.

♀. Length about 13 mm.; wing 10 mm.

Male. Frontal prolongation of head long, nasus very short and stout; palpi brownish black. Antennae moderately long, as shown by the measurements; scape and pedicel yellow, flagellum black; flagellar segments only moderately incised, longer than the verticils. Head brownish gray, with a conspicuous dark brown central stripe on vertex; vertical tubercle low.

Pronotum brownish yellow, narrowly darkened medially. Mesonotal praescutum brownish gray, clearer gray on sides, the median stripe broad, the sides narrowly darker than the central portion, lateral stripes barely indicated; posterior sclerites of notum gray, the scutellum with a barely indicated darker stripe. Pleura gray, vaguely patterned with paler gray; dorso-pleural membrane yellow. Halteres pale brown, the knobs dark brown. Legs with the coxae light gray; trochanters yellow; femora obscure yellow, the tips narrowly and vaguely more darkened; tibiae obscure yellow, the tips very narrowly blackened; basitarsi brownish yellow, outer tarsal segments broken. Wings tinged with brown, the prearcular and costal regions more yellowed; stigma small, darker brown; obliterative area at cord white, conspicuous, separated from the small antestigmal brightening; veins black, paler in the more brightened fields. Squama without trichia. Venation: R_{1+2} entire; petiole of cell M_1 approximately three times m ; cell 2nd A relatively broad.

Abdomen obscure yellow, the tergites with three nearly continuous brown stripes, broken by the pale posterior borders, the lateral stripes widened on the outer segments, the lateral borders broadly clearer yellow; sternites weakly darkened medially, paler on sides. Male hypopygium with the ninth tergite separated from the sternite by a suture; basistyle narrow, entirely separate from the sternite. Ninth tergite, viewed from above, entirely divided by pale membrane, each half produced caudad into a narrowly obtuse darkened lobe, with an internal more pendant flattened blade that is best seen from the side. Outer dististyle long and narrow, a trifle widened outwardly. Inner dististyle massive, the large beak blackened, simple, narrowed to the obtuse tip; a very small dorsal crest at near midlength of posterior border of style; surface of style bearing a stout clavate lobe or rod. Phallosome conspicuous; aedeagus short, subtended by small lobes of about the same length, forming a shield-shaped area; lateral apophyses long and slender, weakly bent at near midlength, the tips obtuse. Eighth sternite narrowed posteriorly, the caudal border truncate, with two small and inconspicuous apical lobes separated from the sternite by membrane; setae of sternite sparse, lacking medially near apex.

Female. Characters generally in male but wings tending to be reduced. Ovipositor with valves short and blunt, especially the cerci which are shorter than the more slender pointed hypovalvae.

Habitat. IDAHO. *Holotype:* ♂, Toller Ditch, Payette National Forest, Valley County, altitude 6,000 feet, August 11, 1953 (Alexander and Baker). *Allotopotype:* ♀.

I cannot indicate any close ally of the present fly. Some features of the male hypopygium suggest the otherwise entirely different *Tipula* (*Lunatipula*) *snoqualmiensis* Alexander but there is no real affinity between the two flies.

***Tipula* (*Oreomyza*) *albertensis fenebris* new subspecies**

♂. Length about 13–14 mm.; wing 14–15.2 mm.; antenna about 3.5–3.6 mm.

Characters as in typical *albertensis* Alexander, differing in the details of structure of the male hypopygium and other lesser features. Antennae a little longer, the individual segments correspondingly lengthened, approximately four times as long as thick; in *albertensis* about three to three and one-half times. Male hypopygium with the rostrum of the inner dististyle stouter, the apical margin somewhat sinuous; outer basal lobe with the blackened spinous points much reduced both in size and number. Gonapophysis with a single sclerotized point, the outer apical one of the typical form lacking.

Habitat. COLORADO. *Holotype*: ♂, Glacier Basin, Rocky Mountain National Park, altitude 8,350 feet, July 25, 1941 (C. P. Alexander). *Paratopotype*: ♂, July 23, 1941.

***Ornithodes harrimani brevirostris* new subspecies**

♂. Length about 15 mm.; wing 14 mm.; rostrum about 0.5 mm.

Characters generally as in the typical form, differing as follows: Rostrum relatively short and stout, approximately one-half as long as the antenna or about two-thirds the remainder of head. In typical *harrimani*, rostrum longer than the remainder of head or approximately two-thirds the antenna. Venation: Cells R_4 and M_1 very short-petiolate; cell *1st* M_2 relatively short and broad, as compared with the typical form. Male hypopygium with the notch of the tergite very broad and shallow, exceeding twice the diameter of either lobe across its base. In *harrimani*, the tergite is narrowed posteriorly, the notch sub-circular in outline, approximately as wide as either lobe at its base.

Habitat. NEVADA. *Holotype*: ♂, Tamarack Flats, Mount Rose Highway, altitude 8,100 feet, July 2, 1953 (C. P. Alexander).

The most southerly known records for typical *harrimani* Coquillett include Salt Creek Falls, Cascade Mountains, Oregon, and the vicinity of the Grand Tetons, Wyoming, both north of 43° North Latitude. The Mount Rose station is just south of 40° North Latitude.

Dactylolabis luteipyga new species

General coloration gray, the praescutum with four more or less clearly defined stripes, the intermediate pair approximated, in cases with their extreme anterior ends polished black; wings with a pale yellow tinge; male hypopygium yellowish brown to pale brown, conspicuously brighter than the remainder of abdomen; outer dististyle with a conspicuous tubercle on mesal face near base.

♂. Length about 7.5–8 mm.; wing 8–8.5 mm.

♀. Length about 10 mm.; wing 9 mm.

Rostrum and palpi black, the former pruinose. Antennae black throughout. Head light gray.

Thorax gray, the pleura clearer gray; praescutum with four more or less clearly defined brown stripes, the intermediate pair very approximated to nearly confluent, their extreme anterior ends in cases polished black. Halteres yellow, knobs weakly darkened. Legs with the coxae yellow, very sparsely pruinose, best indicated on bases of mid-coxae; trochanters yellow; femora brownish yellow, the tips passing into brownish black; tibiae pale brown, the tips narrowly darkened; tarsi black. Wings with a pale yellow tinge, clearer yellow at bases; veins brown to dark brown, distinct. Venation: Supernumerary crossvein in cell R_3 generally lacking, rarely preserved; $m-cu$ at or beyond the fork of M , in cases to more than one-half its length.

Abdomen dark brown, the relatively large hypopygium conspicuously paler, yellowish brown to pale brown, including the dististyles. Outer dististyle with a conspicuous tubercle on mesal face near base, this weakly tuberculate at tip; inner dististyle with a series of strong tubercles along upper surface, as in *sparsimacula*.

Habitat. WYOMING. *Holotype:* ♂, West slope of Grand Tetons, near Teton Canyon, Targhee National Forest, June 27, 1953, swept from Douglas Fir (C. P. Alexander). *Allotopotype:* ♀, pinned with type. *Paratopotypes:* 3 ♂♀.

Although closely allied to *Dactylolabis sparsimacula* Alexander, of the Cascade Mountains Region, I must regard this fly as being specifically distinct. The pale hypopygium of the male is unusually conspicuous.

Erioptera (Psiloconopa) pahasapa new species

Size small (wing 4.5 mm. or less); general coloration of body and appendages black, the thoracic pleura more pruinose; halteres yellow; legs black; wings strongly darkened, the base and a discal area pale; vein *2nd A* straight; male hypopygium with a single deeply forked dististyle; inner gonapophysis a long straight spine with its outer margin microscopically spinulose.

♂. Length about 4.5–4.7 mm.; wing 4–4.2 mm.

♀. Length about 6.5 mm.; wing 4.5 mm.

Entire body, including appendages with the exception of the halteres, black, sparsely pruinose on sides of mesonotum and more heavily so on the thoracic pleura. Praescutal stripes more polished black. Halteres pale yellow, the base of stem narrowly infuscated, the knobs clearer yellow. Wings strongly darkened, the prearcular field and a major blotch at and before cord whitened; cell *Sc* and base of *C* more yellowed; stigma narrow, darker brown; veins brown, paler in the yellowed fields. Venation: Cell *M*₂ open by the atrophy of *m*; vein *2nd A* short and straight, the anal veins divergent.

Male hypopygium large, more polished black; ninth tergite transverse, the posterior border shallowly emarginate. Basistyle produced beyond the point of insertion of the dististyle as a conical point. Dististyle single but forking beyond base into two arms, the outer a slender blackened spine, its tip acute, the inner arm a compressed-flattened blade, the tip narrowly obtuse. Gonapophyses of either side very unequal, the outer appearing as a minute simple black spine, the inner apophysis larger, blackened, narrowed into a long straight spine, the outer margin microscopically spinulose.

Habitat. SOUTH DAKOTA. *Holotype:* ♂, Near Hill City, Black Hills, along small stream with beaver dams, June 17, 1953 (C. P. Alexander). *Allotopotype:* ♀. *Paratopotype:* 1 ♂.

The derivation of the name is from the Sioux, *paha* meaning Hills, *sapa* meaning Black. In its venation the fly is most like *Erioptera (Psiloconopa) painteri* Alexander, the coloration, particularly of the wings, being quite different.

Molophilus (Molophilus) xanthus new species

Belongs to the *gracilis* group, *pubipennis* subgroup; general coloration of body and wings yellow; antennae (male) short, pale basally; tips of femora and tibiae suddenly darkened; male hypopygium with the outer dististyle beyond midlength bent at a right angle, the lower or concave face with microscopic denticles; phallosome conspicuously hairy.

♂. Length about 4.5 mm.; wing 5.5 mm.; antenna about 1 mm.

Rostrum yellow; palpi brown. Antennae (male) with basal segments yellow, the outer ones brown; antenna short, flagellar segments long-oval, the outer verticils longest. Head yellow.

Thoracic dorsum fulvous yellow, the posterior sclerites and the pleura paler yellow. Halteres yellow. Legs yellow, the tips of the femora dark brown, on the posterior legs including about the outer eighth or ninth; tibial tips more narrowly blackened; tarsi passing into brownish black. Wings clear yellow, more saturated along the costal border; veins deeper yellow. Venation: R_2 lying shortly basad of level of $r-m$; petiole of cell M_3 nearly twice the oblique $m-cu$; vein $2nd\ A$ long, very slightly arcuate.

Abdomen yellow, the hypopygium more intensely so. Male hypopygium with the dorsal lobe of basistyle relatively long and slender, the apex rounded, glabrous; mesal lobe with the apex produced, provided with abundant delicate setulae; spines relatively short and stout, about 22 in number. Outer dististyle bent at a right angle beyond midlength, terminating in an acute spine, the lower or concave face with microscopic denticles back to the bend; outer face at near midlength with a few long setae; inner dististyle shorter, the apex extended into a long gently curved spine, the surface rather sparsely spiculate or squamose. Phallosome conspicuously hairy.

Habitat. WASHINGTON. *Holotype:* Lewis and Clark State Park, Lewis County, July 17, 1953 (Alexander and Fender).

The most nearly allied species appears to be *Molophilus (Molophilus) spiculatus* Alexander, distinguished by the different color of the body and appendages and in slight differences of the male hypopygium. Superficially the fly is more like *M. (M.) perflavescens* Alexander, which has the male hypopygium entirely different in structure.